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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/396,248	09/16/1999	SHMUEL PELEG	YIS-002	7168

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EXAMINER

SENF1, BEHROOZ M

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 11/29/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/396,248

Applicant(s)

PELEG ET AL.

Examiner

Behrooz Senfi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 10 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-127 is/are pending in the application.
- 4a) Of the above claim(s) 1-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 28-127 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 28, 31 – 47, 48 – 55, 61, 64 – 77, 79 - 91, 97, 100 - 119 – 127, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US 5,963,664) in view of Hoppenstein (US 5,049,987).

Regarding claims 28, 45 - 47, 49, 52, 61, 78 and 85, Kumar '664 discloses System for generating a stereoscopic Panoramic mosaic image pair (i.e. fig. 1, 104, col. 3, lines 61+ and col. 2, lines 25+), and the claimed "two series of image of a scene as would be recorded by a camera from a respective positions relative to the scene ..... " (i.e. fig. 1, col. 2, lines 30+ and col. 3, lines 61+).

Kumar '664 fails to explicitly teach "strip generator module" to generate image strips.

However, the above mentioned claim limitation is well-known in the prior art as evidenced by Hoppenstein '987. In particular, Hoppenstein '987 teaches dividing (generating) the target image in to a plurality of strip images (i.e. fig. 4, abstract, col. 1, lines 7+).

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Kumar '664 as

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taught by Hoppenstein '987, to achieve an alternative technique to form panoramic stereoscopic image and viewing a different image presentation. Furthermore, for the "selecting strips displacement" reads on functionality of permitting a predetermined (selected) strip image to reach the camera (i.e. col. 3, lines 1+ of Hoppenstein '987).

Regarding claims 31 - 32, 64 - 65 and 100 - 101, combination of Kumar '664 and Hoppenstein '987 teaches the claimed "the series of positions define a translation relative to the scene" and also "change in angular orientation relative to the scene", (i.e. figure 2 of Kumar '664" shows representation of individual images and change of the respective position, which inherently includes change in angular orientation to generate an image mosaic (i.e. col. 7, lines 38+).

Regarding claims 33, 66 and 102, combination of Kumar '664 and Hoppenstein '987 teaches the claimed "strips are parallel to an axis ....." (i.e. col. 13, lines 27 of Kumar '664).

Regarding claims 36, 69 and 105, combination of Kumar '664 and Hoppenstein '987 teaches the claimed "camera to record at least one image strip" (i.e. fig. 11, camera 1104, col. 16, lines 21+ of Kumar '664).

Regarding claims 34, 35, 67, 68, 103 and 104, as for horizontal and vertical axis, images and sub-images in two dimensional, have axis of horizontal and vertical coordinates.

Regarding claim 37, 38, 70, 71, 106 and 107, combination of Kumar '664 and Hoppenstein '987 teaches the claimed "record a plurality of image strips ....." (i.e. fig. 11, camera 1104 of kumar '664 and also fig. 6, recording 48 of Hoppenstein '987).

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Regarding claims 43, 44, 48, 54, 76, 77, 81 and 112 - 113, combination of Kumar '664 and Hoppenstein '987 teaches the claimed "generate at least one image strip using a selected computer graphic methodology" (i.e. fig. 11, col. 1, lines 29+ of Kumar '664) and as for "plurality ....." (i.e. abstract of Hoppenstein '987).

Regarding claims 39 - 42, 72 - 75 and 108 - 111, combination of Kumar '664 and Hoppenstein '987 teaches screening device and the functionality of screening device base on number of strip and permitting (controlling) strip images to reach image capture devices (i.e. cols. 2 - 3, lines 65 - 5, and col. 4, lines 25+ of Hoppenstein '987), which meets the limitation as claimed "reflector configured to reflect images ....." and "reflector position control module .....", and as for "reflector has at least one flat portion" and also "reflector has at least one curved portion", reads on any suitable form of lineated screen (i.e. col. 4, lines 25+).

Regarding claim 49, the limitations claimed are substantially similar to claim 1, therefore the grounds for rejecting claim 1 also apply here.

Regarding claims 50, 83, 90 and 119, combination of Kumar '664 and Hoppenstein '987 teaches system for generating a Stereoscopic Panoramic mosaic image pair (i.e. fig. 1, 104, col. 3, lines 61+ of Kumar '656) by taking the images and combining to make a panoramic mosaic image, therefore taking the images would include the camera position information in order to construct the panoramic mosaic images (i.e. fig. 11, col. 16, lines 4+), also Hoppenstein '987 teaches creating multi-dimensional images based on the plurality of strip images and the relative position of the camera (i.e. abstract, col. 4, lines 13+).

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Regarding claims 51, 84, 91, 120 and 127, combination of Kumar '664 and Hoppenstein '987 teaches the claimed "measuring image motion ....." (i.e. col. 7, lines 62+ of Kumar '664).

Regarding claims 53, 79, 86, 115 and 122, the limitations claimed are substantially similar to claim 46, therefore the grounds for rejecting claim 46 also apply here.

Regarding claim 78, the limitations as claimed are substantially similar to claim 45, therefore the grounds for rejecting claim 45 also apply here.

Regarding claims 80, 87, 116 and 123, the limitations claimed are substantially similar to claim 46, therefore the grounds for rejecting claim 46 also apply here.

3. Claims 29 - 30, 62 - 63 and 98 - 99, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US 5,963,664) in view of Hoppenstein (US 5,049,987) further in view of Taylor (US 6,331,871).

Regarding claims 29 - 30, 62 - 63 and 98 - 99, combination of Kumar '664 and Hoppenstein '987 teaches system for generating a Stereoscopic Panoramic mosaic image pair, by taking the images and combining to make a panoramic mosaic images (i.e. fig. 1, 104, col. 3, lines 61+ of Kumar '656).

Combination of Kumar '664 and Hoppenstein '987 fails to explicitly teach the claimed "in which series of positions define a path .....".

However, the above claimed limitations are well-known in the art as evidenced by Taylor '871, in particular (i.e. col. 4, lines 25+) teaches choosing preselected path which may be straight line or any type of curved arc.

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In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the combination system of Kumar '664 and Hoppenstein '987 as taught by Taylor '871 for the benefit of improving and combining images in any order (i.e. col. 4, lines 36+).

4. Claims 56 - 60, 92 - 96, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasakura et al. (US 5,929,951) in view of Ritchey (US 5,130,794).

Regarding claims 56, 59, 92 and 95, Sasakura '951 discloses displaying stereo panoramic image to a viewer (i.e. col. 6, lines 49+) and "a viewing arrangement for facilitating transmission of a respective one of images to each of the viewer's eye ..... " and the claimed "overlapping fashion ..... " (i.e. fig. 8, col. 6, lines 57+, col. 7, lines 12+, lines 53+).

Sasakura '921 fails to explicitly teach the claimed "plurality of projectors ..... ".

However, the above mentioned claim limitation is well-known in the prior art as evidenced by Ritchey '794. In particular, Ritchey '794 teaches plurality of projectors (i.e. fig. 36, col. 32, lines 56+).

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Sasakura '921 as taught by Ritchey '794, to achieve panoramic display.

Regarding claims 57 - 58 and 93 - 94, combination of Sasakura '951) and Ritchey '794 teaches the claimed "orthogonal polarization ..... " and the claimed "pair of

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lenses .....” and the claimed “different color .....” (i.e. fig. 9a – 9c, and col. 15, lines 19+ of Sasakura ‘951).

Regarding claims 60 and 96, the limitations claimed are substantially similar to claim 57, therefore the grounds for rejecting claim 57 also apply here. Furthermore, for the additional limitation as claimed “shutter .....” (i.e. see col. 12, lines 29+ of Ritchey ‘794).

Regarding claim 88, limitations as claimed are substantially similar to claim 48, therefore the grounds for rejecting claim 48 also apply here.

Regarding claims 55, 82, 89, 118 and 125, the limitations claimed are substantially similar to claim 49, therefore the grounds for rejecting claim 49 also apply here.

Regarding claims 97, 117, 121 and 124, the limitations claimed are substantially similar to claims 28 and 48, therefore the grounds for rejecting claims 28 and 48 also apply here. Furthermore for the additional limitation as claimed “computer program .....” (see i.e. col. 1, lines 29+ of Kumar ‘664).

Regarding claim 114, the limitations claimed are substantially similar to claim 45 and 78, therefore the grounds for rejecting claims 45 and 78 also apply here. Furthermore, for the additional limitation as claimed “computer program .....” please see claim 97.

Regarding claim 126, the limitations claimed are substantially similar to claim 50 therefore the grounds for rejecting claim 50 also apply here.



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***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**


**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

11/25/2002

  
CHRIS KELLEY  
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